

REMARKS

Claims 1, 2, 4, 7-11 and 13-18 are pending in this application. By this Amendment, claims 1 and 18 are amended to distinguish over the cited references. Claims 3, 5 and 12 are canceled. Claim 13 is amended to correct dependency.

No new matter has been added by this Amendment. Support for the language added to claims 1 and 18 can be found in the original specification at, for example paragraphs 23 and 28 and original claims 3, 5 and 12.

I. Allowable Subject Matter

Applicants note with appreciation that claim 8 is allowable. In view of the amendments and the following arguments, Applicants respectfully submit that all claims are now allowable.

II. Rejections Under 35 U.S.C. §102

A. Dimick

Claims 1-3, 7, 17 and 18 were rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 4,509,966 ("Dimick"). This rejection is respectfully traversed.

Dimick teaches the use of a thin sheet of ceramic material which is placed over the inlet face of the element. Then, by use of a punch die, the material is displaced from the sheet into the inlet openings. Thereafter, the ceramic material is fired and fused to the adjacent walls. See column 5, lines 38 to 41 of Dimick.

Thus, the plugging member and the partition walls are directly bonded by fusing. There is no space to apply a bond material between the plugging member and the partition walls as required in claims 1 and 18. Applicants submit that Dimick does not teach or suggest the use of a bond material for bonding the plugging member to the partition wall as required in claims 1 and 18.

As Dimick does not teach or suggest all of the features recited in claims 1 and 18, Applicants submit that claims 1-3, 7, 17 and 18 are allowable over Dimick. Therefore, reconsideration and withdrawal of the rejection are respectfully requested.

B. Wong

Claims 1, 7, 11 and 18 were rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent No. 6,630,221 ("Wong"). This rejection is respectfully traversed.

The Patent Office alleges that Wong teaches a method of reinforcing a honeycomb structure comprising inserting preformed sag-resistant nucleus forming monolithic composite plugs of incompatible in situ expandable thermoplastic into select hollow portions of the honeycomb, then heating the composite to cause expansion of the thermoplastic particles to achieve a faultless interface with the wall of the interior portions.

However, Wong does not teach or suggest bonding the plugging member to the partition walls surrounding the plugging member to form a plug portion as recited in claims 1 and 18. Wong simply teaches heating the composition to a temperature which causes expansion of the thermoplastic particles in the composite, and expansion of the composite achieves a faultless interface with the wall of the interior portion of the honeycomb structure. See column 15, lines 62-67 of Wong.

This means that the composite and the wall of the honeycomb structure are closely abutted to each other, not that the plugging member is bonded to the partition walls surrounding the plugging member as recited in claims 1 and 18.

Furthermore, Wong does not teach or suggest that a major component of the plugging member is ceramic as required in claims 1 and 18. The major component of the plugging member is preferably a ceramic that is about 50% or more by mass of the entire plugging member. See paragraph 23 of the specification.

Instead, Wong teaches that the plugging member is a monolithic composite of thermoplastic particles and thermosettable or thermoplastic matrix resin. See column 10, lines 29-44 of Wong. Thus, the major component of the plug taught by Wong is plastic.

As Wong does not teach or suggest all of the features recited in claims 1 and 18, Applicants submit that claims 1, 7, 11 and 18 are allowable over Wong. Therefore, reconsideration and withdrawal of the rejection are respectfully requested.

C. JP '512

Claims 1, 2, 7, 9, 11, 17 and 18 were rejected under 35 U.S.C. §102(b) as allegedly being anticipated by JP 3-74512 Abstract ("JP '512"). This rejection is respectfully traversed.

JP '512 teaches a preparatory plug portion 22 having a heater 21. The plug portion 22 is inserted in a cell, then heat resistant cement 24 is injected between the plug portion 22 and the cell wall to fix the plug portion 22 in the cell.

However, JP '512 does not teach or suggest that the plugging member is bonded to the partition walls by firing as required in claims 1 and 18. JP '512 teaches a plug portion 22 having a heater 21 made of nichrome wire. Thus, a firing process cannot be utilized to bond the plug portion to the partition walls because of the low heat resistance of nichrome.

Thus, Applicants submit that JP '512 does not teach or suggest firing the bond material to bond the plugging member and the partition walls as required in claims 1 and 18.

As JP '512 does not teach or suggest all of the features recited in claims 1 and 18, Applicants submit that claims 1, 2, 7, 9, 11, 17 and 18 are allowable over JP '512. Therefore, reconsideration and withdrawal of the rejection are respectfully requested.

D. JP '922

Claims 1-5, 7, 9, 10, 15, 16 and 18 were rejected under 35 U.S. §102(b) as allegedly anticipated by, or in the alternative, under 35 U.S.C. §103(a) as allegedly obvious over JP 2002-309922 ("JP '922"). This rejection is respectfully traversed.

The Patent Office alleges that JP '922 teaches all of the features recited in claims 1 and 18. In particular, the Patent Office alleges that JP '922 discloses fixing the plugs to the upstream ends. Applicants disagree with this allegation.

Neither the Abstract nor the computer generated translation teaches or suggests that the plugs taught by JP '922 are in any way fixed or bonded to the partition walls of the honeycomb structure as recited in claims 1 and 18.

As JP '922 does not teach or suggest all of the features recited in claims 1 and 18, Applicants submit that claims 1-5, 7, 9, 10, 15, 16 and 18 are allowable over JP '922. Therefore, reconsideration and withdrawal of the rejection are respectfully requested.

E. Castro

Claims 1, 6, 7, 11 and 18 were rejected under 35 U.S. §102(b) as allegedly anticipated by, or in the alternative, under 35 U.S.C. §103(a) as allegedly obvious over U.S. Patent No. 5,116,689 ("Castro"). This rejection is respectfully traversed.

Castro teaches that coiled inserts are placed in individual cells in selected portions of the honeycomb core. See the Abstract of Castro. The coiled inserts are formed of a foil strip. See column 3, lines 59-60 of Castro. Thus, Castro does not teach or suggest that the major component of the insert is ceramic as required by claims 1 and 18.

Furthermore, Castro does not teach or suggest that the plugging member is formed by extrusion molding and/or press molding as required in claims 1 and 18.

As Castro does not teach or suggest all of the features recited in claims 1 and 18, Applicants submit that claims 1, 6, 7, 11 and 18 are allowable over Castro. Therefore, reconsideration and withdrawal of the rejection are respectfully requested.

III. Rejections Under 35 U.S.C. §103(a)

A. Dimick in view of Ishihara

Claims 14-16 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Dimick in view of U.S. Patent No. 6,800,107 ("Ishihara"). This rejection is respectfully traversed.

Ishihara does not remedy the deficiencies of Dimick. In particular, Ishihara does not teach or suggest the use of a bond material for bonding the plugging member to the partition walls as required in claims 1 and 18.

Applicants submit Dimick and Ishihara, alone or in combination, do not teach or suggest claim 1, or dependent claims 14 and 16 dependent therefrom. Reconsideration and withdrawal of the rejection are thus respectfully requested.

B. JP '922 in view of Nakamoto

Claims 2, 3, 14 and 17 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over JP '922 and further in view of U.S. Patent No. 4,718,926 ("Nakamoto"). This rejection is respectfully traversed.

Nakamoto does not remedy the deficiencies of JP '922. In particular, JP '922 and Nakamoto, either in combination or alone, do not teach or suggest bonding the plugging member to the partition walls surrounding the plugging member, to form a plug portion as recited in claim 1.

Applicants submit that as claim 1 is allowable over JP '922 and Nakamoto, alone or in combination, dependent claims 2, 3, 14 and 17 are also allowable. Reconsideration and withdrawal of the rejection are thus respectfully requested.

C. JP '922 in view of Nakamoto and in view of Ogawa

Claims 12 and 13 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over JP '922 in view of Nakamoto and further in view of U.S. Patent No. 4,559,193 ("Ogawa"). This rejection is respectfully traversed.

Ogawa does not remedy the deficiencies of JP '922 and Nakamoto. In particular, JP '922, Nakamoto and Ogawa, either in combination or alone, do not teach or suggest bonding the plugging member to the partition walls surrounding the plugging member, to form a plug portion as recited in claim 1.

Applicants submit that as claim 1 is allowable over JP '922, Nakamoto and Ogawa, alone or in combination, dependent claims 12 and 13 are also allowable. Reconsideration and withdrawal of the rejection are thus respectfully requested.

IV. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1, 2, 4, 7-11 and 13-18 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

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